

Palisado Avenue Bridge
(Bridge #452)
Spanning the Farmington River
on Connecticut State Route 159
Windsor
Hartford
Connecticut

HAER No. CT-31

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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
Mid-Atlantic Regional Office
National Park Service
U.S. Department of the Interior
Philadelphia, Pennsylvania 19106

HISTORIC AMERICAN ENGINEERING RECORD

Palisado Avenue Bridge
(Bridge #452)

HAER No. CT-31

Location: Spanning the Farmington River on Connecticut State Route 159
Windsor, Hartford County, Connecticut

UTM: 18.696060.4636840
Quad: Hartford North, Connecticut

Date of Construction: 1916; Rehabilitated in 1942

Builder: Berlin Iron Works

Present Owner: State of Connecticut Department of Transportation

Present Use: Vehicular bridge

Significance: The Palisado Avenue Bridge is historically and archaeologically significant as an example of a through truss span of the Pratt design. Pratt trusses were originally patented in 1844 and, by the early part of the twentieth century, had become the most popular bridge type for spans up to 150 feet.

Project Information: This documentation was undertaken in November 1987 in accordance with the Memorandum of Agreement by the Connecticut Department of Transportation as a mitigative measure prior to replacement of the bridge superstructure

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Connecticut Department of Transportation
Wethersfield, Connecticut

February 1988

HISTORICAL INFORMATION

A. Physical History

The present bridge was constructed in 1916 by the Berlin Iron Works to replace a wooden covered bridge in 1854. It consists of two riveted through truss spans of the Pratt type. Pratt trusses were originally patented in 1844 and, by the early part of the twentieth century, had become the most popular bridge type for spans up to 150 feet. In the Pratt design, the vertical members act in compression and the diagonals act in tension. Palisado Avenue Bridge (Bridge #452) has two spans, a 110.6 north span with 7 panels, and a 132.8-foot south span with 8 panels. The bridge width is approximately 30 feet, including a 5-foot sidewalk which is cantilevered outside of the truss on the west side.

When the present bridge was constructed in 1916, it used the 1854 piers and abutments, which had to be reinforced. (Windsor Town Crier 1916) The bridge was built with a wooden plank floor but extensive modifications were made to the bridge in 1942 when the entire floor system was replaced. Originally, there were transverse beams (at right angles to the road) fastened between the webs of the interior stringers (beams underneath the floor running with the roadway). These beams held the wooden plank flooring, but have since been removed. A concrete deck has been constructed on corrugated steel forms.

By 1973, the condition of the bridge had deteriorated to the point that replacement was recommended, at a projected cost of \$1,150,000. Further deterioration resulted in a 1985 reduction in the allowable load limit from 16 to 13 tons for a single vehicle.

B. History of the Crossing

The history of the Bridge #452 crossing is essentially the history of Windsor. In 1634, settlers from Plymouth, Massachusetts, sailed up the Connecticut River and set up a trading post near the mouth of the Farmington River. The following year, settlers from other Massachusetts towns of Cambridge and Watertown arrived and established the town of Dorchester, later renamed Windsor in 1637. Although the English had originally been invited to settle there by Wahginnacut, a leader of the Podunk Indians, there was enough tension between the Indians and the white man to make the settlers extremely wary. In 1637, trouble with the Pequot Indians in southeastern Connecticut led to the Pequot War, and the town of Windsor was ordered to provide thirty men and some supplies. As soon as the soldiers left, the people of Windsor started to build a wall, or palisade, around their dwellings. The enclosure was a fairly large parallelogram, extending well over 1,000 feet northward from the Farmington River. The southern wall ran along the Farmington River for 60 rods, or 660 feet. (Stiles, 1959:136) Most crossings of the Farmington River, including the present Palisado Avenue Bridge, extend southward from this 1736 palisaded boundary.

In 1638, the General Court ordered a highway be laid out between Hartford and Windsor. One of the earliest attempts to provide regular transport across the Farmington River, or the Ricut as it was then called, was in January 1650 when the town contracted with John Brooks to operate a ferry across the river. Included in this agreement was a commitment for the town to provide Brooks with a 10' x 15' house. (Trumbull 1886:508). Once the ferry was in place, orders giving magistrates and elders priority of crossing on the Lord's Day were published. Regulations concerning use of the ferry on ordinary occasions were also established, "not above thirty-five persons at a time were to go in the great canoe, nor above six persons at a time in the little canoe," under penalty of a five-pence fine. There is some questions about whether a bridge was built over the Farmington in 1639, as reported by Hayden (1900) but there is evidence that the ferry continued until 1749, when the first free bridge was built across the river (Trumbull 1886:518, Wilson 1984:4). The town voted "to allow any person or persons liberty to build a bridge, provided they did so at their own expense, and made it a free bridge forever. (Wilson 1984:3). For whatever reasons, thirty residents accepted that offer and did build a bridge. By 1759, the bridge needed to be repaired or replaced, but the town meeting voted to do neither, so the unrepaired bridge sat until 1762 when the General Assembly voted to allow Windsor to conduct a 250 pound lottery for the replacement. Half of the new bridge was washed downstream in 1767, and again the town refused to repair the damage, until the General Assembly ordered it rebuilt. When a freshet washed that bridge away in 1782, a number of Windsor residents and ship captains petitioned the General Assembly to build a swing bridge so that coasting vessels could pass farther up the Farmington River to Poquonnock. Such a bridge was built, but it lasted only twelve years before being washed away. Another bridge was built in 1794, and this time they built a causeway to help protect the bridge against freshet damage. Evidently, the causeway did help because this bridge lasted nearly 30 years, until it too was washed away in 1833. Again, a replacement as constructed, which lasted almost twenty years, when a flood took it away in 1854.

At this point, two abutments and a center pier were built of stone to replace the wooden underpinnings that supported all previous structures. These improvements virtually eliminated the flood threat, and subsequent bridges have lasted much longer. The 1854 structure, a wooden covered bridge, served until 1916, when it was torn down and the present two-span steel bridge erected.

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